

AMENDMENTS TO THE CLAIMS

Please enter the following amendments without prejudice or disclaimer.

This listing of claims will replace all prior versions, and listings, of claims in the application:

In the claims

1. (Currently Amended): An immunomodulatory polynucleotide/microcarrier (IMP/MC) complex, comprising:

a polynucleotide linked to the surface of a biodegradable microcarrier (MC), wherein said polynucleotide comprises the sequence 5'-C, G-3', wherein the polynucleotide is greater than 6 nucleotides in length and wherein said MC is less than 10 μm in size.

2. (Original): The IMP/MC complex of claim 1, wherein said polynucleotide is covalently linked to said microcarrier.

3. (Original): The IMP/MC complex of claim 1, wherein said polynucleotide is non-covalently linked to said microcarrier.

4. (Original): The IMP/MC complex of claim 1, wherein said microcarrier is a liquid phase microcarrier.

5. (Original): The IMP/MC complex of claim 1, wherein said microcarrier is a solid phase microcarrier.

6. (Original): The IMP/MC complex of claim 1, wherein said microcarrier is from 25 nm to 5 μm in size.

7. (Original): The IMP/MC complex of claim 6, wherein said microcarrier is from 1.0 μm to 2.0 μm in size.
8. (Original): The IMP/MC complex of claim 7, wherein said microcarrier is 1.4 μm in size.
9. (Original): The IMP/MC complex of claim 1, wherein said microcarrier is cationic.
10. (Original): The IMP/MC complex of claim 1, wherein said complex is antigen-free.
11. (Original): The IMP/MC complex of claim 1, wherein said polynucleotide comprises the sequence 5'-T, C, G-3'.
12. (Original): The IMP/MC complex of claim 11, wherein said polynucleotide comprises the sequence 5'-TCGX₁X₂X₃X₄-3' or the sequence 5'-X₁TCGX₂X₃X₄-3', wherein X₁, X₂, X₃, X₄ are nucleotides.
13. (Original): The IMP/MC complex of claim 12, wherein said polynucleotide comprises the sequence 5'-TCGTCGX₁-3', wherein X₁ is a nucleotide.
14. (Original): The IMP/MC complex of claim 12, wherein said polynucleotide comprises a sequence selected from the group consisting of 5'-TCGTCGA-3', 5'-TCGAAAA-3', 5'-TCGCCCC-3', 5'-TCGGGGG-3' and 5'-TCGTTTT-3'.
15. (Original): The IMP/MC complex of claim 1, wherein said polynucleotide comprises the sequence 5'-C, G, pyrimidine, pyrimidine, C, G-3'.
16. (Original): The IMP/MC complex of claim 1, wherein said polynucleotide comprises the sequence 5'-purine, purine, C, G, pyrimidine, pyrimidine, C, G-3'.

17. (Original): The IMP/MC complex of claim 11, wherein said polynucleotide comprises the sequence SEQ ID NO:1.

18. (Original): The IMP/MC complex of claim 1, wherein said polynucleotide further comprises the sequence 5'-T, C, G-3'.

19. (Original): The IMP/MC complex of any of claims 1, 11, 12, 13, 14, or 18, wherein said polynucleotide is 7 nucleotides in length.

20. (Original): The IMP/MC complex of any of claims 1, 11, 12, 13, 14 or 18, wherein said complex further comprises an antigen.

21. (Original): The IMP/MC complex of claim 20, wherein said antigen is an allergen.

22. (Original): The IMP/MC complex of claim 1, wherein said polynucleotide comprises a phosphate backbone modification.

23. (Original): The IMP/MC complex of claim 22, wherein said phosphate backbone modification is a phosphorothioate.

24. (Withdrawn): A method of modulating an immune response in an individual comprising administering to an individual a composition comprising an immunomodulatory polynucleotide/microcarrier (IMP/MC) complex, said complex comprising a polynucleotide linked to a biodegradable microcarrier (MC), wherein said polynucleotide comprises the sequence 5'-C, G-3' and wherein said MC is less than 10 μm in size, in an amount sufficient to modulate an immune response in said individual.

25. (Withdrawn): The method of claim 24, wherein said microcarrier is a solid phase microcarrier.

26. (Withdrawn): The method of claim 24, wherein said microcarrier is a liquid phase microcarrier.

27. (Withdrawn): The method of claim 24, wherein said polynucleotide is covalently linked to said microcarrier.

28. (Withdrawn): The method of claim 24, wherein said polynucleotide is non-covalently linked to said microcarrier.

29. (Withdrawn): The method of claim 24, wherein said complex is antigen-free.

30. (Withdrawn): The method of claim 24, wherein a Th1-type immune response is stimulated.

31. (Withdrawn): The method of claim 24, wherein a Th2-type immune response is suppressed.

32. (Withdrawn): The method of claim 24, wherein interferon-gamma (IFN- γ) is increased in said individual.

33. (Withdrawn): The method of claim 24, wherein interferon-alpha (IFN- α) is increased in said individual.

34. (Withdrawn): The method of claim 24, wherein levels of IgE is reduced in said individual.

35. (Withdrawn): The method of claim 24, wherein said polynucleotide comprises the sequence 5'-T, C, G-3'.

36. (Withdrawn): The method of claim 35, wherein said polynucleotide comprises the sequence 5'-TCGX₁X₂X₃X₄-3' or the sequence 5'-X₁TCGX₂X₃X₄-3', wherein X₁, X₂, X₃, X₄ are nucleotides.

37. (Withdrawn): The method of claim 36, wherein the polynucleotide comprises the sequence 5'-TCGTCGX₁-3', wherein X₁ is a nucleotide.

38. (Withdrawn): The method of claim 36, wherein said polynucleotide comprises a sequence selected from the group consisting of 5'-TCGTCGA-3', 5'-TCGAAAA-3', 5'-TCGCCCC-3', 5'-TCGGGGG-3' and 5'-TCGTTTT-3'.

39. (Withdrawn): The method of claim 24, wherein said polynucleotide comprises the sequence 5'-C, G, pyrimidine, pyrimidine, C, G-3'.

40. (Withdrawn): The method of claim 24, wherein said polynucleotide comprises the sequence 5'-purine, purine, C, G, pyrimidine, pyrimidine, C, G-3'.

41. (Withdrawn): The method of claim 35, wherein said polynucleotide comprises the sequence SEQ ID NO:1.

42. (Withdrawn): The method of claim 24, wherein said polynucleotide further comprises the sequence 5'-T, C, G-3'.

43. (Withdrawn): The method of any of claims 24, 35, 36, 37, 38 or 42, wherein said polynucleotide is 7 nucleotides in length.

44. (Withdrawn): The method of any of claims 24, 35, 36, 37, 38 or 42, wherein said composition further comprises an antigen.

45. (Withdrawn): The method of claim 44, wherein said antigen is an allergen.

46. (Withdrawn): The method of claim 24, wherein said polynucleotide comprises a phosphate backbone modification.

47. (Withdrawn): The method of claim 46, wherein said phosphate backbone modification is a phosphorothioate.

48. (Currently Amended): A kit, comprising:
an immunomodulatory polynucleotide/microcarrier (IMP/MC) complex, said complex comprising a polynucleotide linked the surface of to a biodegradable microcarrier (MC), wherein said polynucleotide comprises the sequence 5'-C, G-3', wherein the polynucleotide is greater than 6 nucleotides in length and wherein said MC is less than 10 μm in size; and
instructions for use of the IMP/MC complex in immunomodulation of an individual.

49. (Original): The kit of claim 48, wherein said polynucleotide is covalently linked to said microcarrier.

50. (Original): The kit of claim 48, wherein said polynucleotide is non-covalently linked to said microcarrier.

51. (Original): The kit of claim 48, wherein said microcarrier is a liquid phase microcarrier.

52. (Original): The kit of claim 48, wherein said microcarrier is a solid phase microcarrier.

53. (Original): The kit of claim 48, wherein said microcarrier is from 25 nm to 5 μm in size.

54. (Original): The kit of claim 53, wherein said microcarrier is from 1.0 μm to 2.0 μm in size.

55. (Original): The kit of claim 54, wherein said microcarrier is 1.4 μm in size.

56. (Original): The kit of claim 48, wherein said microcarrier is cationic.
57. (Original): The kit of claim 48, wherein said complex is antigen-free.
58. (Original): The kit of claim 48, wherein said polynucleotide comprises the sequence 5'-T, C, G-3'.
59. (Original): The kit of claim 58, wherein said polynucleotide comprises the sequence 5'-TCGX₁X₂X₃X₄-3' or the sequence 5'-X₁TCGX₂X₃X₄-3', wherein X₁, X₂, X₃, X₄ are nucleotides.
60. (Original): The kit of claim 59, wherein said polynucleotide comprises the sequence 5'-TCGTCGX₁-3', wherein X₁ is a nucleotide.
61. (Original): The kit of claim 59, wherein said polynucleotide comprises a sequence selected from the group consisting of 5'-TCGTCGA-3', 5'-TCGAAAA-3', 5'-TCGCCCC-3', 5'-TCGGGGG-3' and 5'-TCGTTTT-3'.
62. (Original): The kit of claim 48, wherein the polynucleotide comprises the sequence 5'-C, G, pyrimidine, pyrimidine, C, G-3'.
63. (Original): The kit of claim 48, wherein the polynucleotide comprises the sequence 5'-purine, purine, C, G, pyrimidine, pyrimidine, C, G-3'.
64. (Original): The kit of claim 58, wherein the polynucleotide comprises the sequence SEQ ID NO:1.
65. (Original): The kit of claim 48, wherein said polynucleotide further comprises the sequence 5'-T, C, G-3'.

66. (Original): The kit of any of claims 48, 58, 59, 60, 61 or 65, wherein said kit further comprises an antigen.

67. (Original): The kit of claim 66, wherein said antigen is an allergen.

68. (Original): The kit of claim 48, wherein said polynucleotide comprises a phosphate backbone modification.

69. (Original): The kit of claim 68, wherein said phosphate backbone modification is a phosphorothioate.

70. (Currently Amended): A kit, comprising:
an immunomodulatory polynucleotide/microcarrier (IMP/MC) complex, said complex comprising a polynucleotide linked to the surface of a biodegradable microcarrier (MC), wherein said polynucleotide comprises the sequence 5'-C, G-3' and wherein said polynucleotide is 7 nucleotides in length; and
instructions for use of the IMP/MC complex in immunomodulation of an individual.

71. (Original): The kit of claim 70, wherein said polynucleotide comprises the sequence 5'-T, C, G-3'.

72. (Original): The kit of claim 71, wherein said polynucleotide consists of the sequence 5'-TCGX₁X₂X₃X₄-3' or the sequence 5'-X₁TCGX₂X₃X₄-3', wherein X₁, X₂, X₃, X₄ are nucleotides.

73. (Original): The kit of claim 72, wherein said polynucleotide consists of the sequence 5'-TCGTCGX₁-3', wherein X₁ is a nucleotide.

74. (Original): The kit of claim 72, wherein said polynucleotide consists of a sequence selected from the group consisting of 5'-TCGTCGA-3', 5'-TCGAAAA-3', 5'-TCGCCCC-3', 5'-TCGGGGG-3' and 5'-TCGTTTT-3'.

75. (Original): The kit of claim 70, wherein said polynucleotide further comprises the sequence 5'-T, C, G-3'.

76. (Original): The kit of claim 70, wherein said complex is antigen-free.

77. (Original): The kit of claim 70, further comprising an antigen.

78. (Original): The kit of claim 77, wherein said antigen is an allergen.

79. (Original): The kit of claim 70, wherein said polynucleotide comprises a phosphate backbone modification.

80. (Original): The kit of claim 79, wherein said phosphate backbone modification is a phosphorothioate.

81. (Original): A composition comprising an IMP/MC complex of claim 1 and a pharmaceutically acceptable excipient.

82. (Original): A composition according to claim 81, wherein the composition is antigen-free.

83. (Original): A composition according to claim 81, wherein the composition further comprises an antigen.

84. (Original): A composition according to claim 83, wherein the antigen is an allergen.